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09/593,864	06/15/2000	Tooru Kamibayashi	04329.2319	9097

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EXAMINER

NORRIS, TREMAYNE M

ART UNIT	PAPER NUMBER
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2137

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/593,864

Applicant(s)

KAMIBAYASHI ET AL.

Examiner

Tremayne M. Norris

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 17 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 9/17/04 have been fully considered but they are not persuasive. Applicant asserts that Ueda does not teach a "removable" recording medium, however, examiner respectfully disagrees. Ueda teaches a recording medium, an optical disk (col.23 and col.24 reference #607), that is removable from an optical disc drive (fig.15). The optical disk contains first information that depends on the removable recording medium (col.17 lines 11-18), and second information which is to be shared by the recording apparatus in executing mutual authentication with the recording apparatus and depends on the removable recording medium (col.4 lines 42-51; col.23 lines 65-67; col.24 lines 13-22).

Applicants also argue that Ueda does not teach "generating by the recording apparatus authentication information used in mutual authentication with the recording medium on the basis of only the first information obtained from the recording medium, and executing mutual authentication between the recording apparatus and the recording medium using the generated authentication information and the second information." Examiner respectfully disagrees as Ueda teaches generating authentication information used in mutual authentication with the recording medium (col.37 lines 18-20; col.37 lines 46-51) which is done on the basis of only the first information obtained from the removable recording medium (col.17 lines 11-18). Ueda also teaches executing mutual authentication between the recording apparatus and the recording medium using the

generated authentication information and the second information (encrypted disk key information) (col.37 lines 46-53; col.24 lines 8-17; col.24 lines 44-46; col.24 lines 59-65).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-9 rejected under 35 U.S.C. 102(e) as being anticipated by Ueda et al.

Regarding Claim 1, Ueda et al teach a mutual authentication method for use between a recording apparatus which records copied contents on a removable recording medium having an arithmetic processing function, and the removable recording medium, said method comprising the steps of:

storing in the removable recording medium at least first information which depends on the removable recording medium, and second information which is to be shared by the recording apparatus in executing mutual authentication with the recording apparatus and depends on the recording medium; and

generating by the recording apparatus authentication information used in mutual authentication with the removable recording medium on the basis of only the first information obtained from the removable recording medium, and executing mutual authentication between the recording apparatus and the recording medium using the generated authentication information and the second information (col.2 line 61 thru col.3 line 5; col.3 line 45 thru col.5 line 64), wherein executing the mutual authentication includes the steps of

generating a random number in the recording apparatus and transferring the random number to the removable recording medium (col.37 line 18-23),

generating a first function in the recording apparatus using the generated authentication information and the generated random number (col.37 lines 45-49),

generating a second function in the removable recording medium using the generated second information and the transferred random number, and transferring the second function to the recording apparatus (col.37 lines 34-37), and

comparing the generated first function with the generated second function in the recording apparatus (col.37 lines 49-51).

Regarding Claim 2, Ueda et al teach the method according to claim 1, further comprising the step of: generating the authentication information by encrypting the first information using an encryption key obtained from the removable recording medium (col.4 lines 3-4; col.4 lines 43-51).

Regarding Claim 3, Ueda et al teach a mutual authentication method for use between a reproducing apparatus which reproduces copied contents recorded on a removable recording medium having an arithmetic processing function, and the removable recording medium, said method comprising the steps of:

storing in the removable recording medium at least first information which depends on the removable recording medium, and second information which is to be shared by the reproducing apparatus in executing mutual authentication with the reproducing apparatus and depends on the removable recording medium; and

generating by the reproducing apparatus authentication information used in mutual authentication with the removable recording medium on the basis of only the first information obtained from the removable recording medium, and executing mutual authentication between the reproducing apparatus and the removable recording medium using the generated authentication information and the second information (col.2 line 61 thru col.3 line 5; col.3 line 45 thru col.5 line 64), wherein executing the mutual authentication includes the steps of

generating a random number in the reproducing apparatus and transferring the random number to the removable recording medium (col.37 line 18-23),

generating a first function in the reproducing apparatus using the generated authentication information and the generated random number (col.37 lines 45-49),

generating a second function in the removable recording medium using the generated second information and the transferred random number, and transferring the second function to the reproducing apparatus (col.37 lines 34-37), and

comparing the generated first function with the generated second function in the reproducing apparatus (col.37 lines 49-51).

Regarding Claim 4, Ueda et al teach the method according to claim 3, further comprising the step of:

generating the authentication information by encrypting the first information using an encryption key obtained from the removable recording medium (col.4 lines 3-4; col.4 lines 43-51).

Regarding Claim 5, Ueda et al teach a recording apparatus for recording copied contents on a removable recording medium while limiting the number of copied contents to be recorded on the removable recording medium, said apparatus comprising:

generation means for generating authentication information, which is used in mutual authentication with the removable recording medium and is to be shared by the removable recording medium, on the basis of first information which is obtained from the removable recording medium and depends on the recording medium; and

mutual authentication means for executing mutual authentication with the removable recording medium using the authentication information generated by said

generation means (col.2 line 61 thru col.3 line 5; col.3 line 45 thru col.5 line 64; col.18 lines 10-32; col.21 lines 25-29), wherein the mutual authentication means includes

- means for generating a random number and transferring the random number to the removable recording medium (col.37 line 18-23),
- means for generating a first function using the generated authentication information and the generated random number (col.37 lines 45-49),
- means for receiving from the removable recording medium a second function generated using second information and the transferred random number (col.37 lines 34-37), and
- means for comparing the generated first function with the generated second function (col.37 lines 49-51).

Regarding Claim 6, Ueda et al teach an apparatus according to claim 5, wherein said generation means generates the authentication information by encrypting the first information using an encryption key obtained from the removable recording medium (col.4 lines 3-4; col.4 lines 43-51).

Regarding Claim 7, Ueda et al teach a reproducing apparatus for reproducing copied contents recorded on a removable recording medium while limiting the number of copied contents to be recorded on the removable recording medium, said apparatus comprising:

generation means for generating authentication information, which is used in mutual authentication with the removable recording medium and is to be shared by the removable recording medium, on the basis of first information which is obtained from the removable recording medium and depends on the removable recording medium; and

mutual authentication means for executing mutual authentication with the removable recording medium using the authentication information generated by said generation means (col.2 line 61 thru col.3 line 5; col.3 line 45 thru col.5 line 64; col.18 lines 10-32; col.21 lines 25-29), wherein the mutual authentication means includes

means for generating a random number and transferring the random number to the removable recording medium (col.37 line 18-23),

means for generating a first function using the generated authentication information and the generated random number (col.37 lines 45-49),

means for receiving from the removable recording medium a second function generated using second information and the transferred random number (col.37 lines 34-37), and

means for comparing the generated first function with the generated second function (col.37 lines 49-51).

Regarding Claim 8, Ueda et al teach an apparatus according to claim 7, wherein said generation means generates the authentication information by encrypting the first

information using an encryption key obtained from the removable recording medium (col.4 lines 3-4; col.4 lines 43-51).

Regarding Claim 9, Ueda et al teach a removable recording medium having an arithmetic processing function, comprising:

storage means for pre-storing first information which is unique to said removable recording medium, and second information which is to be shared by a recording apparatus for recording copied contents on said recording medium and a reproducing apparatus for reproducing the copied contents in executing mutual authentication among the removable recording medium, the recording apparatus, and the reproducing apparatus, and depends on said removable recording medium; and

mutual authentication means for executing mutual authentication between the removable recording medium and the recording apparatus, and between the removable recording medium and the reproducing apparatus using authentication information generated based on the first information by the recording apparatus and the reproducing apparatus, and the second information (col.4 lines 3-4; col.4 lines 43-51), wherein the mutual authentication means includes

means for generating a random number and transferring the random number to one of the recording apparatus and the reproducing apparatus (col.37 lines 59-63),

means for generating a first function using the generated authentication information and the generated random number (col.38 lines 13-17),

means for receiving from one of the recording apparatus and the reproducing apparatus a second function generated using the authentication information and the transferred random number (col.38 lines 4-13), and

means for comparing the generated first function with the generated second function (col.38 lines 17-19).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al.

Regarding claims 10-14, Examiner takes official notice that memory cards are well known in the art to be removable recording mediums. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize memory cards in order to extend RAM storage capacity or to transport information from one module to another.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tremayne M. Norris whose telephone number is (571) 272-3874. The examiner can normally be reached on M-F 7:30AM-5:00PM alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tremayne Norris

December 27, 2004



ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER